ABSTRACT

The pressure sensor device has a laminated diaphragm (12) in which a strain resistance gauge is formed in a surface and a stopper member (13) including a concave

5   portion forming a curved surface parallel to a surface formed by displacement of the diaphragm, the concave portion being disposed to face the diaphragm. Specifically, the concave portion of the stopper member is formed into a curved surface in which depth y at a distance x from the

10   center of the diaphragm is expressed by a quartic function $[y=pr^4(1-x^2/r^2)^2/64D]$ in relation to the operating pressure for protection against maximum pressure p when the diaphragm has a radius of r, a thickness of t, and a flexural rigidity of D.